

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Please amend the first full paragraph on 43 as follows:

Next, a difference integral value $\sigma(k)$ is generated by an integrator 50f as a signal of the sum of the difference signal value $\delta(k)$ and a delayed value $\sigma(k-1)$ of the difference integral value, and then a modulation output $u''(k)$ as a modulation value is generated by a relay element 50g as a predetermined value $+R/-R$ based on the difference integral value $\sigma(k)$. After that, a gain-adjusted value $u(k)$ is generated by an amplifier 50h as a value obtained by subjecting the modulation output $u''(k)$ to gain adjustment by a predetermined amplitude-adjusting gain F ($= KDSM$), and then the control input $V_{cain}(k)$ is generated by an adder 50i as the sum of the gain-adjusted value $u(k)$ and the predetermined offset value V_{cain_oft} from the aforementioned signal generator offset value-generating section 50c.

Please amend the fourth full paragraph on page 51 as follows:

On the other hand, if the answer to the question of the step 2 is negative (NO) affirmative (YES), i.e. if the engine 3 is being started, the process proceeds to a step 7, wherein the target cam phase $Cain_cmd$ is set to a predetermined start-time value $Cain_cmd_st$. Then, the above steps 5 and 6 are executed, followed by terminating the present process.

Please amend the second full paragraph on page 52 as follows:

As described above, according to the control system 1 of the present embodiment, the reference input r is calculated as a positive value by the TDFSLD controller 40 so as to avoid inversion of the directions of the magnetic fluxes in the electromagnet 30 35 of the electromagnetic variable cam phase mechanism 30. Then, the limited value r_1 of the reference input r is calculated as a positive value by the DSM controller 50, and the limited value deviation r_2 , which is the difference between the limited value r_1 and the offset value V_{cain_oft} , is modulated with the algorithm [equations (11) to (13)] based on the $\Delta\Sigma$ modulation algorithm, whereby the modulation output u'' is calculated as the predetermined value $+R/-R$. Then, the offset value V_{cain_oft} is added to the gain-adjusted value u obtained by subjecting the modulation output u'' to gain adjustment, whereby the control input to the electromagnetic variable cam phase mechanism 30 is calculated.

Please amend the second full paragraph on page 60 as follows:

The control algorithm for the DM controller 80 is expressed by equations (30) to (36) in FIG. 24. A limited value $\text{Lim}(r(k))$ in the equation (30) is set to the same limit range as that of the limited value $\text{Lim}(r(k))$ in the aforementioned equation (22). Further, a nonlinear function $f_{nl}(\delta(k))$ in the equation (34) is also set to the same value as that of the nonlinear function $f_{nl}(\delta(k))$ in the aforementioned equation (34) 27. More specifically, the nonlinear function $f_{nl}(\delta(k))$ is set such that when $\delta(k) \geq 0$, $f_{nl}(\delta(k)) = R$ holds, and when $\delta(k) < 0$, $f_{nl}(\delta(k)) = -R$ holds (it should be noted that the nonlinear function $f_{nl}(\delta(k))$ may be set such that when $\delta(k) = 0$, $f_{nl}(\delta(k)) = 0$ holds).

Please amend the first full paragraph on page 63 bridging page 64 as follows:

Subsequently, a difference integral value $\sigma(k)$ is generated by a difference calculator 91f as a signal of the sum of the difference signal value $\delta(k)$ and a delayed value $\sigma(k-1)$ of the difference integral value, and then a modulation output $u''(k)$ is generated by a relay element 91g as a predetermined value $+R1/-R1$ based on the difference integral value $\sigma(k)$. For the above-described reason, the predetermined value $R1$ is set to such a value larger than a value of 1 as always satisfies the relationship of $R > \lceil r2(k) \rceil$. After that, a gain-adjusted value $u(k)$ is generated by an amplifier 91h as a value obtained by subjecting the modulation output $u''(k)$ to gain adjustment by a predetermined amplitude-adjusting gain F , and then the fuel correction value $KAF(k)$ is generated by an adder 91i as the sum of the gain-adjusted value $u(k)$ and the predetermined offset value $Kcmd_oft$ from the ~~signal generator offset value-generating section 91c.~~